

## **CHAPTER 2**

### **PERMITS**

## **2.1 Grading Permit**

### **2.1.1 Purpose**

A permit for site grading shall be obtained from the Division of Engineering after the Division of Engineering accepts the Erosion and Sediment Control Plan.

### **2.1.2 Procedure**

A site grading plan shall be submitted showing the original and finish grade contours. The grading plan shall be in conformance with the erosion and sediment control plan.

## **2.2 Kentucky Division of Water Floodplain Construction Permits**

### ***2.2.1 Purpose***

Pursuant to Kentucky law, dams or other improvements obstructing the movement of water in the floodplain are often regulated by the Kentucky Division of Water (KDOW). The purpose of the procedure described here is to comply with the provisions of Chapter 19 in the Zoning Ordinance requiring that the KDOW first review obstructions to the flow of water in floodplains. Implementation of the procedure should prevent a situation where the Urban County Government would allow construction of and ultimately assume operation and maintenance of a structure that did not meet the standards of the KDOW.

A Floodplain Construction Permit is required from the KDOW of the Environmental and Public Protection Cabinet prior to the construction, reconstruction, relocation, or improvement of any dam, embankment, levee, dike, bridge, fill, or other obstructions across or along any stream or in the floodway of any stream. Permits are required for any such activity in designated 100-year floodplains or areas known to be flood prone. Exemptions may exist for activities in watersheds of less than one square mile of drainage. A permit from the KDOW is also required to deposit or cause to be deposited any matter that will in any way restrict or disturb the flow of water in the channel or in the floodway of any stream. In addition, a KDOW permit is required prior to the construction of structures qualifying as dams.

### ***2.2.2 Procedure***

In instances where KDOW permits are required, construction shall not begin until evidence of the Floodplain Construction Permit, or a determination that no permit is required, is provided to the Division of Engineering. In the case of dams, where water will be impounded on a temporary basis, construction shall not begin on facilities dependent upon the dam until an approval by the KDOW to impound water has been obtained. The permitting requirements apply to dams constructed for sediment and erosion control, stormwater detention, or just aesthetic amenities. The requirements also apply to other flow obstructions like pump stations. The following procedure outlines the process for deciding whether a KDOW permit is required.

### ***2.2.3 Determination of Need for Permit***

This section describes the process for determining whether a KDOW permit is required.

#### ***Step 1: Determine 100-year Post-Development Floodplain Boundaries***

Post-development floodplain boundaries for the 100-year flood are defined in Chapter 1 of this manual.

If the analysis described in the definition of post-development floodplains indicates that the construction is not in the floodplain, it can be submitted to the Division of Engineering as evidence of compliance with KDOW procedures.

***Step 2: Determine the Hazard Classification of the Obstruction per DOW Criteria***

***Hazard Classification A*** - This classification may be applied for structures located such that failure would cause loss of the structure itself, but little or no additional damage to other property. Such structures will generally be located in rural or agricultural areas where failure may damage farm buildings other than residences, agricultural lands, or county roads.

***Hazard Classification B*** - This classification may be applied for structures located such that failure may cause significant damage to property and project operation, but loss of human life is not envisioned. Such structures will generally be located in predominantly rural agricultural areas where failures may damage isolated homes, main highways or major railroads, or cause interruption of use or service of relatively important public utilities.

***Hazard Classification C*** - This classification must be applied for structures located such that failure may cause loss of life, or serious damage to homes, industrial or commercial buildings, important public utilities, main highways or major railroads. This classification must be used if failure would cause probable loss of human life.

The Division of Engineering methodology for characterizing the hazard is based on the height of the structure. If the height is less than 15 feet, an A classification may be assumed if no roadways, walkways, residences, commercial buildings, or agricultural buildings are located, or could be located in the future, in the downstream floodplain within a distance from the structure defined by the equation given below, unless visual analysis indicates that a higher hazard classification is more appropriate.

Equation for calculating distance from the structure to a roadway, walkway, or building:

$$X = 40Y$$

Where X is the downstream distance (ft) measured from the downstream toe of the structure and Y is the height (ft) of the structure measured vertically from the downstream toe to the top of the dam.

If the height of the structure is greater than 15 feet, the justification for the hazard classification shall be made based on a failure analysis. The analysis shall be conducted using the National Weather Service Dam Break Model. The results of the analysis shall be submitted to the Division of Engineering as documentation of the compliance with the KDOW procedures.

### ***Step 3: Determine if the Structure is a Dam***

A structure is defined by the KDOW as a dam if the distance from the downstream toe to the crest of the embankment is 25 feet or greater or if the structure has the potential for impounding, either temporarily or permanently, 50 acre feet or more, measured to the crest of the embankment.

A KDOW Permit is required if:

- (1.) From step 3, the obstruction is a dam
- (2.) From step 2, the hazard classification is a C
- (3.) From step 2, the hazard classification is an A or B and the drainage area above the obstruction is greater than 1 square mile

### ***2.2.4 Fills***

Fills not impounding water are a class of obstruction that are covered under this requirement. A KDOW Floodplain Construction Permit is not required for a fill if the drainage area above the fill is less than or equal to 1 square mile. However, in accordance with the requirements given in Chapter 1 of this manual, fill may only be placed in the floodplain if the fill is related to the construction of a stormwater management practice, roadway, or utility and the fill does not cause an increase in the 100-year post development flood level as calculated using the procedures given in Chapter 3 of this manual.

## **2.3 Kentucky Division of Water KPDES Stormwater Permit**

### **2.3.1 Purpose**

Erosion and Sediment Control on construction sites of one acre or greater is controlled by the Kentucky KPDES General Permit for Stormwater Point Sources (Construction). The KPDES General Permit requires, among other things

1. the submission of a Notice of Intent to the Division of Water before construction begins
2. the preparation of a stormwater best management practices plan, which includes an erosion and sediment control plan, to be kept on-site at all times
3. a description of procedures to maintain erosion and sediment control measures during the period of construction
4. the identification of each contractor or subcontractor who will install each erosion and sediment control measure
5. the signing by each contractor or subcontractor of a statement certifying the awareness of the requirements of the KPDES Stormwater Permit for the site
6. the inspection by qualified personnel, provided by the developer, of the site at least once every seven calendar days and within 24 hours of the end of a storm of 0.5" or greater
7. the submission of a Notice of Termination to the Division of Water with a statement certifying that all stormwater discharges associated with the construction activity have been eliminated

### **2.3.2 Procedure**

Construction shall not begin until the Notice of Intent and items 2.-5. above are provided to the Division of Water with a copy to the Division of Engineering. During the construction process, evidence of the inspection listed in item 6 above shall be submitted to the Division of Water with a copy to the Division of Engineering.

## **2.4 Federal Emergency Management Agency (FEMA)**

### ***2.4.1 Purpose***

FEMA manages the National Flood Insurance Program (NFIP) based on maps showing floodplains and flood hazard areas. As part of the agreement for making flood insurance available in Fayette County, the NFIP required the LFUCG to adopt floodplain management ordinances containing certain minimum requirements intended to reduce future flood losses. LFUCG is also responsible for submitting data to FEMA reflecting revised flood hazard information so that the NFIP maps can be revised as appropriate. Up to date maps allow risk premium rates and floodplain management requirements to be based on current data.

In instances where construction in the floodplain changes the floodplain elevations or the shape of the floodplain as shown on the NFIP maps, FEMA has a procedure for revising the maps. In general, construction in floodplains is not envisioned in Fayette County except for road and utility crossings and the construction of sanitary sewer and stormwater management facilities. In some instances, construction of these facilities may change the floodplain elevations, necessitating the filing of documents with FEMA to correct the floodplain maps. In other instances, the FEMA maps may incorrectly show the floodplains. Where a floodplain is shown incorrectly, the filing of documents with FEMA is required to correctly define the floodplains.

### ***2.4.2 Procedure***

Construction activities within the FEMA floodplain shall comply with the requirements of Article 19 of the Zoning Ordinance.

For projects that change the FEMA floodplain, the Engineer shall submit the appropriate technical data to FEMA. The requirements for submitting the data can be obtained from the LFUCG FEMA coordinator.

### ***2.4.3 Estimating Base Flood Elevations***

Areas designated as Zone A on Flood Insurance Rate Maps do not have Base Flood Elevations (BFEs). It is acceptable to estimate the BFE by superimposing the Zone A limits on a 2-foot contour map and interpolating between the contours.

## **2.5 401 and 404 Permits – Kentucky Division of Water and U.S. Army Corps of Engineers**

### **2.5.1 Purpose**

The KDOW Floodplain Construction Permit addressed above only relates to the potential flooding from the construction of an obstruction to the flow of water in the stream or floodplain. The KDOW has another permitting program (401 permit) related to construction which impacts the stream channel and areas below the ordinary high water level. In general, construction below the ordinary high water level is not envisioned in the waters of Fayette County. However, if situations arise where construction is necessary below the ordinary high water level or in wetlands, the Kentucky Division of Water (KDOW) has requirements for projects that impact these waters. In addition, the U.S. Army Corps of Engineers (COE) has requirements for projects that impact waters of the United States, including wetlands. Where the KDOW 401 or COE 404 permits, including coverage under the COE Nationwide Permits, are required, construction shall not begin until evidence of the 401 and/or 404 permits or a determination that no permit is required is provided to the LFUCG.

### **2.5.2 Procedure**

Permit applications and related plans shall be submitted to the Corps of Engineers and KDOW. Copies shall also be submitted to the LFUCG Division of Engineering.